2

3

6

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

ABSTRACT OF THE DISCLOSURE

A semiconductor workpiece holder used in electroplating systems for plating metal layers onto a semiconductor workpieces, and is of particular advantage in connection with plating copper semiconductor materials. The workpiece holder includes electrodes which have a contact face which bears against the workpiece and conducts current therebetween. The contact face is provided with a contact face outer contacting surface which is made from a contact face material similar similar to the workpiece plating material which is to be plated onto the semiconductor workpiece. The contact face can be formed by pre-conditioned an electrode contact using a plating metal which is similar to the plating materials which is to be plated onto the semiconductor workpiece.